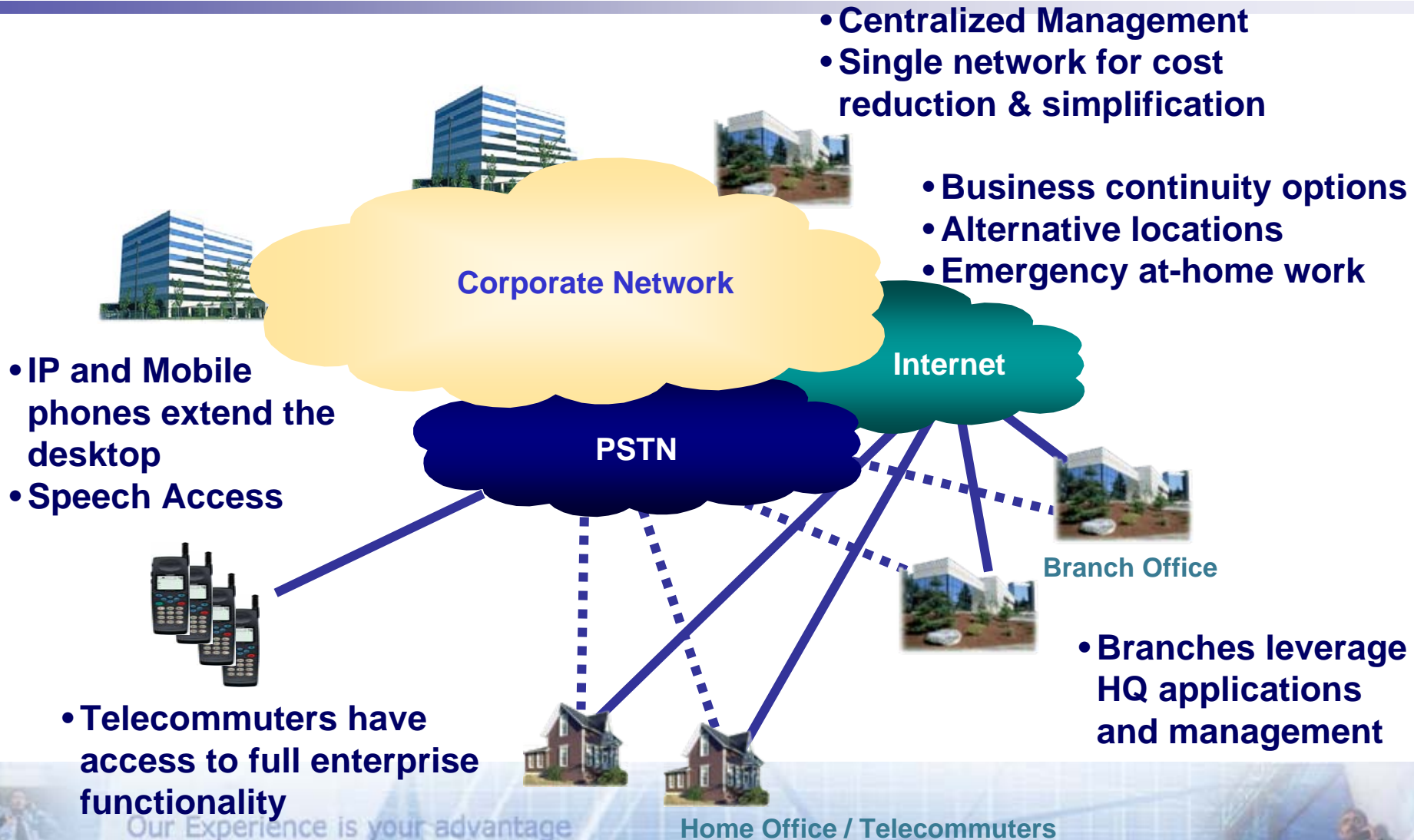# Scalable Remote Office Options
Using ACM to Achieve your Strategic Goals

David Lover – Chief Strategy and Technology Officer

Cross Telecom

Virtualizing the Enterprise
Extending your Investment

CROSS
Our Experience. Your Advantage.

- **Centralized Management**
- **Single network for cost reduction & simplification**

- **Business continuity options**
- **Alternative locations**
- **Emergency at-home work**

Corporate Network

Internet

PSTN

- **IP and Mobile phones extend the desktop**
- **Speech Access**

Branch Office

- **Branches leverage HQ applications and management**

- **Telecommuters have access to full enterprise functionality**

Home Office / Telecommuters

Our Experience is your advantage

Let's Talk

Communication Manager
Categories for Comparison

- Station Quantity
- Station Flexibility
- Local Presence
- Survivability

Communication Manager
Remote Site Options – Just IP Phones

Remote/Satellite Office

Main/Regional Office

Communication Manager Media Server/Gateway

Switched Ethernet & Routing

LAN

Corporate IP WAN

QOS Enabled Ethernet Switch and Router

IP Ethernet or Soft phones

Messaging Server
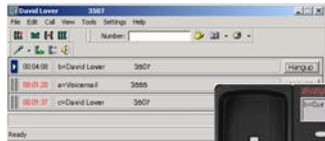
LEC T1/CO/DID

Communication Manager
Remote Site Options – Just IP Phones

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Home Office, Hotel, etc

Main/Regional Office

Communication Manager Media Server/Gateway

IP Softphone running on PC

Switched Ethernet & Routing

VPN (H.323 compliant)

Cable/DSL Modem/Router

Dual-Connect if data network can't deliver acceptable voice quality

LEC

Messaging Server

LEC T1/CO/DID

Our Experience is your advantage
Let's Talk

David Lover's Relative Score of Coolness
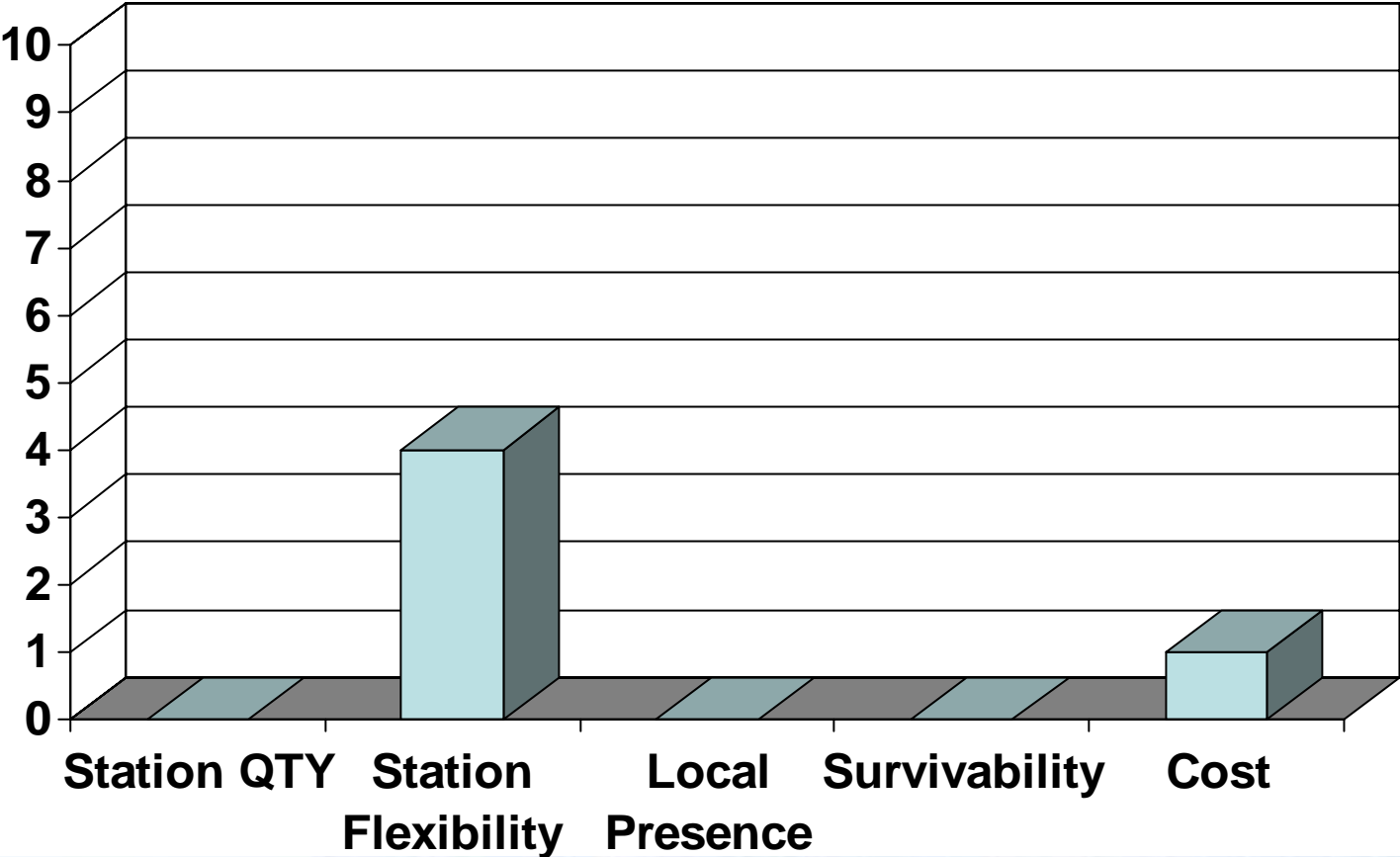
Where does it fit?
Remote Site Options – Just IP Phones

- Advantages
  - Least expensive
  - Shared adjunct access (i.e. Voicemail, Call Accounting, CMS, etc.)
  - Single point of Management/Administration
  - One CM system to upgrade
  - Share LD trunks from main site.

- Disadvantages
  - No Survivability
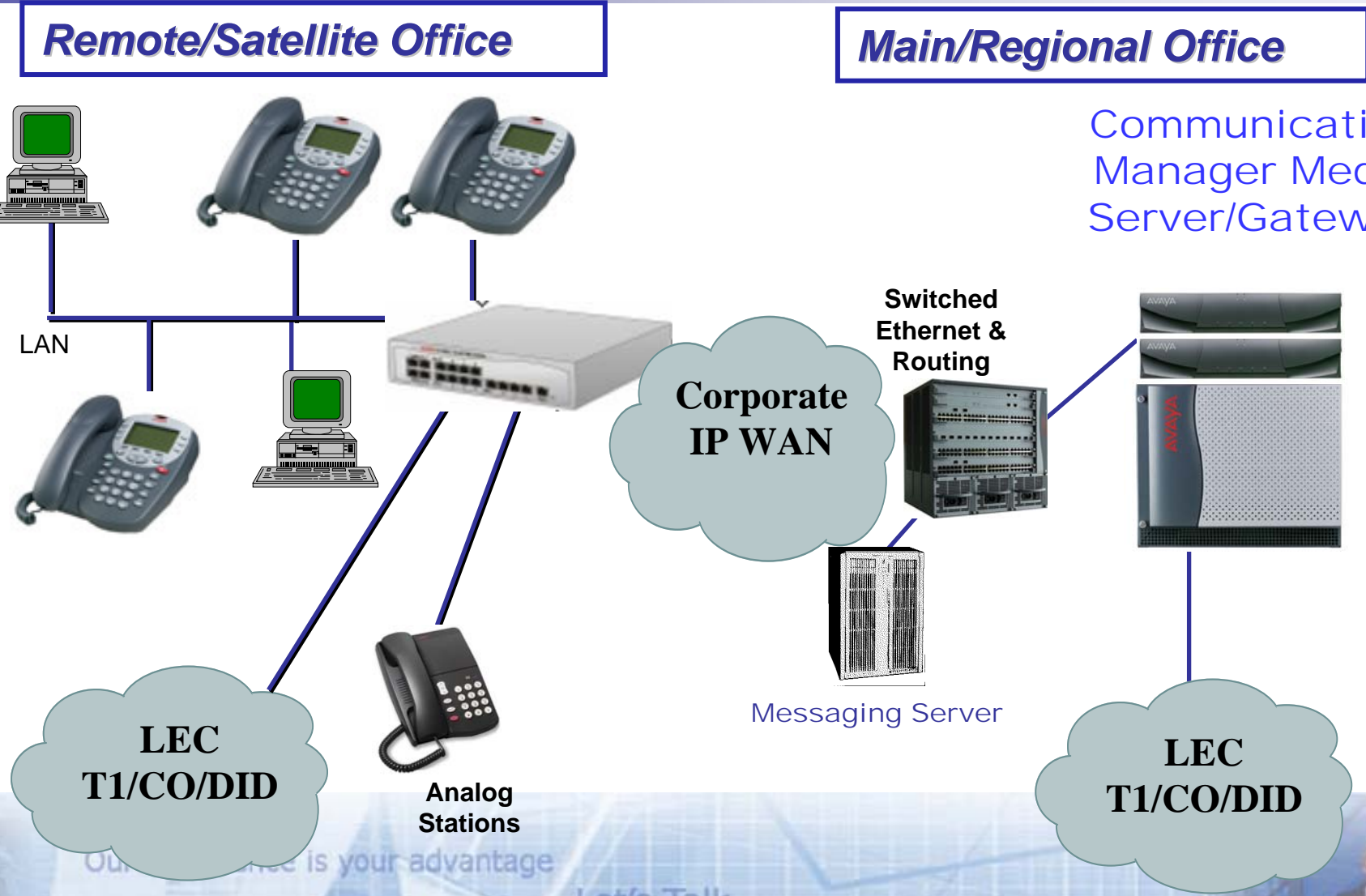 - No Local Presence
  - Supports ONLY IP Hard/Soft Phones

- Requirements
  - R9.5 or higher, CM 2.1 recommended
  - IP Enabled (MedPro's, C-LAN's, IP RTU, etc.)
  - LAN/WAN that meets Connectivity, QOS and Bandwidth requirements
  - IP Hard/Soft Phones

Our Experience is your advantage

Let's Talk

Communication Manager
Remote Site Options – G150 (H.323 Gateway)

Remote/Satellite Office

Main/Regional Office

Communication Manager Media Server/Gateway

LAN

Switched Ethernet & Routing

Corporate IP WAN

LEC T1/CO/DID

Analog Stations

Messaging Server

LEC T1/CO/DID
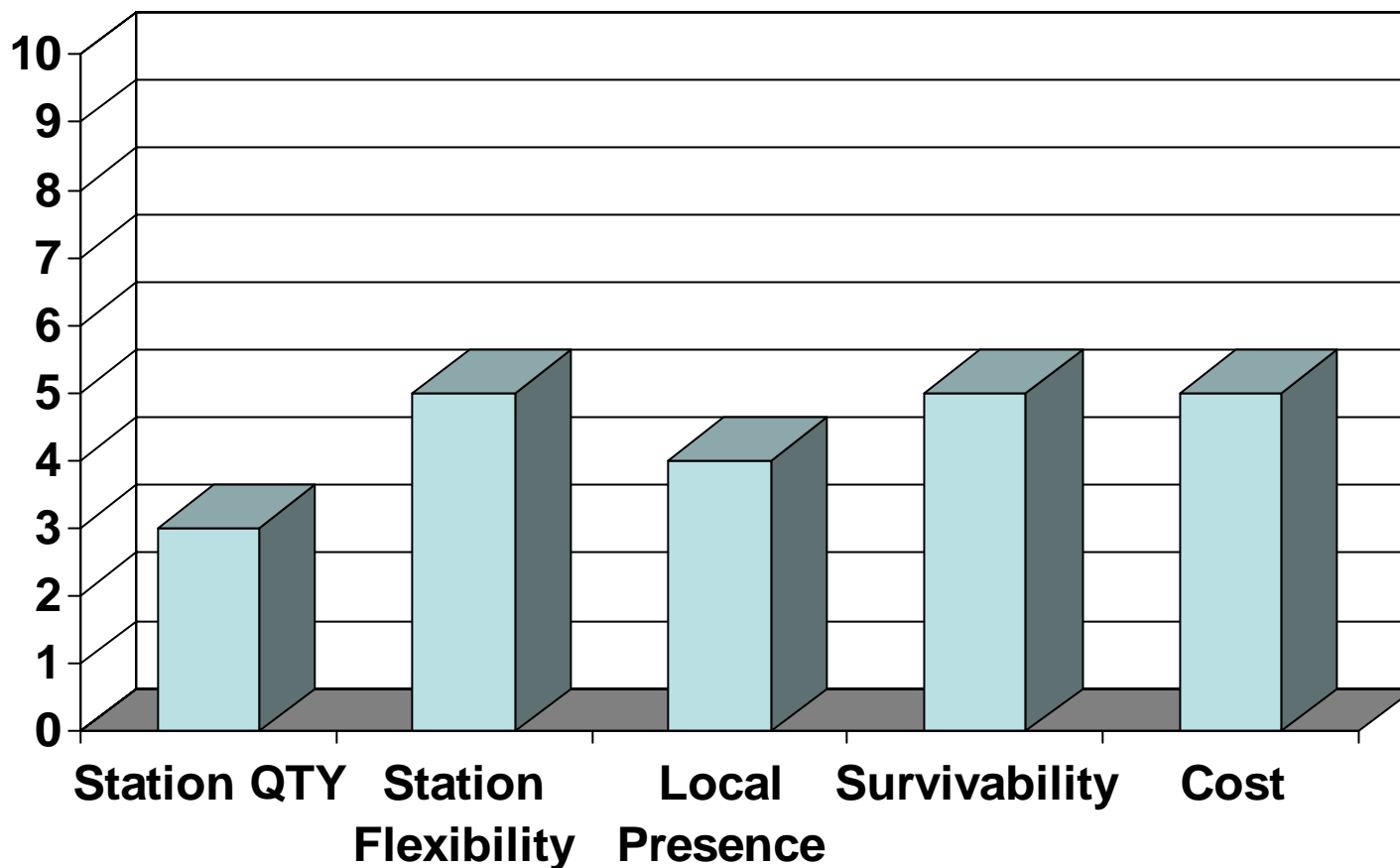
Communications Manager

Remote Site Options – G150 (H.323 Gateway)

CROSS

David Lover's Relative Score of Coolness

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- ## Advantages
  - Still very inexpensive
  - Shared adjunct access (i.e. Voicemail, Call Accounting, CMS, etc.)
  - One CM system to upgrade
  - Share LD trunks from main site along with limited local CO's
  - Supports limited analog endpoints (CO trunks or loop start stations).
  - Basic Survivability

- ## Disadvantages
  - H.323 Gateway – Multiple Points of Administration. NOT ACM feature set in survivable mode
  - Supports ONLY IP Hard/Soft Phones and Analog phones (Future support for digital)
  - No Call Center support

- ## Requirements
  - CM 2.2 at main site
  - IP Enabled (MedPro's, C-LAN's, IP trunk and station RTU, etc.)
  - G150 (2 different models)
  - LAN/WAN that meets Connectivity, QOS and Bandwidth requirements
  - IP Hard/Soft Phones
  - Multi-Location Software (MLS) or ARS Partitioning (limits qty)

Our Experience is your advantage
Let's Talk

Communication Manager
Remote Site Options – G250 with LSP

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Remote/Satellite Office
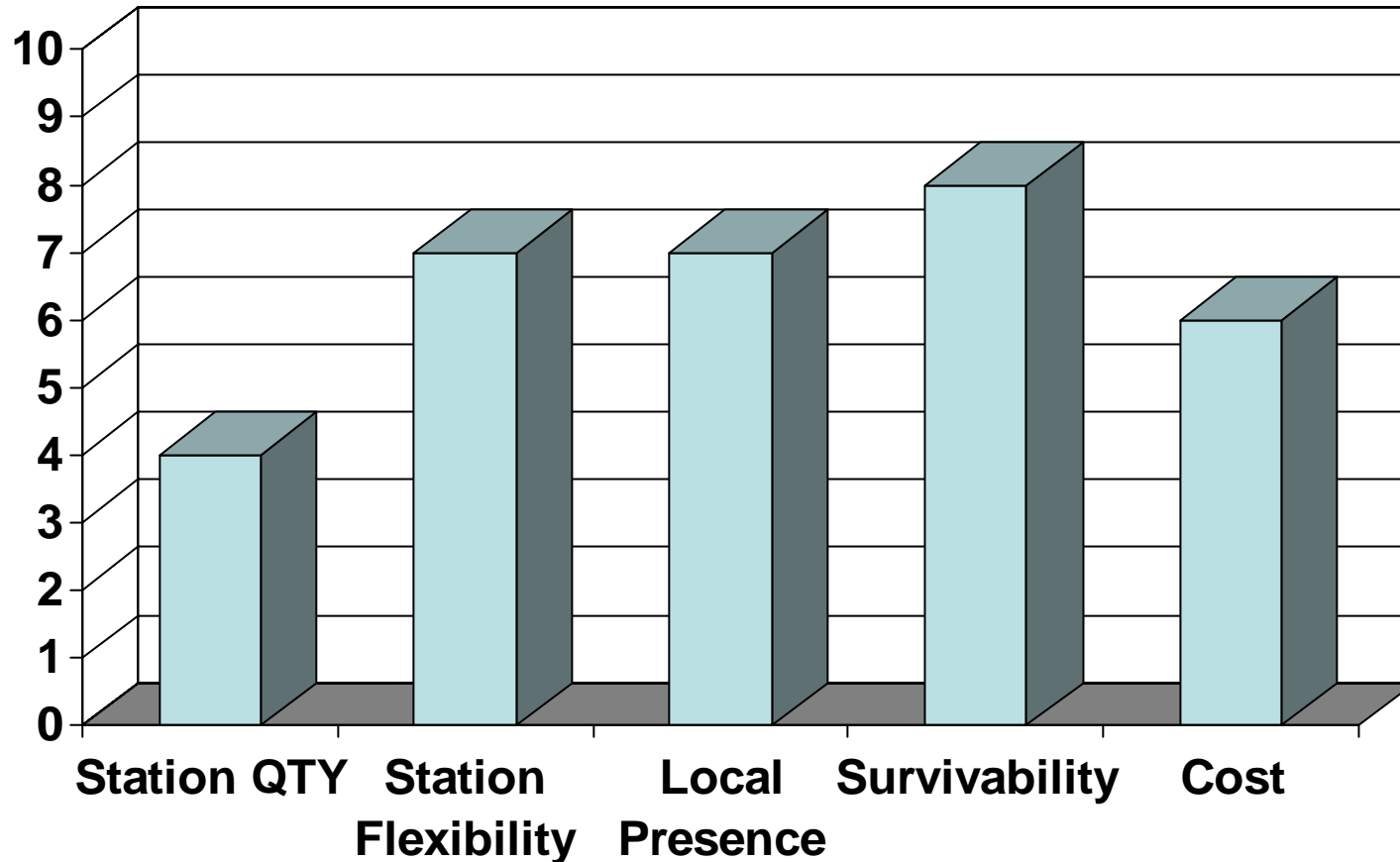
Main/Regional Office

Communication Manager Media Server/Gateway

LAN

Switched Ethernet & Routing

Corporate IP WAN

Messaging Server

LEC T1/CO/DID

Analog Stations

Digital Stations

LEC T1/CO/DID

Communication Manager
Remote Site Options – G250 with LSP

David Lover's Relative Score of Coolness

Category	Score
Station QTY	4
Station Flexibility	7
Local Presence	7
Survivability	8
Cost	6

Our Experience is your advantage

Let's Talk

Where does it fit?
Remote Site Options – G250 with LSP

- **Advantages**
  - Shared adjunct access (i.e. Voicemail, Call Accounting, CMS, etc.)
  - One CM system to upgrade
  - VERY flexible trunking options
  - Built in PoE for IP Stations (8)
  - Local Survivable Processor has full ACM support
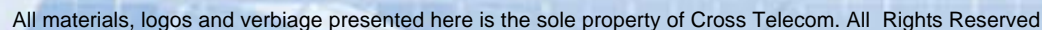
- **Disadvantages**
  - Very limited station qty's. Max of 8 IP Stations.
  - Fixed configuration, Not Stackable
  - There are a lot of "real life" issues to think about for survivability

- **Requirements**
  - S8300/S8500/S8700 CM3.0 or higher at main site ((Enterprise Software recommended)
  - IP Enabled (MedPro's, C-LAN's, IP trunk and station RTU, etc.)
  - G250 at remote site with Media Modules to support desired endpoints
  - LAN/WAN that meets Connectivity, QOS and Bandwidth requirements
  - Desired endpoints
  - Multi Location Software or ARS Partitioning (limits qty)

Communication Manager
Remote Site Options – G350 with LSP

Remote/Satellite Office

Main/Regional Office

Communication Manager Media Server/Gateway

LAN

Corporate IP WAN

Switched Ethernet & Routing

LEC T1/CO/DID

Analog Stations

Digital Stations

Messaging Server

LEC T1/CO/DID

Let's Talk

Communication Manager
Remote Site Options – G350 with LSP

David Lover's Relative Score of Coolness
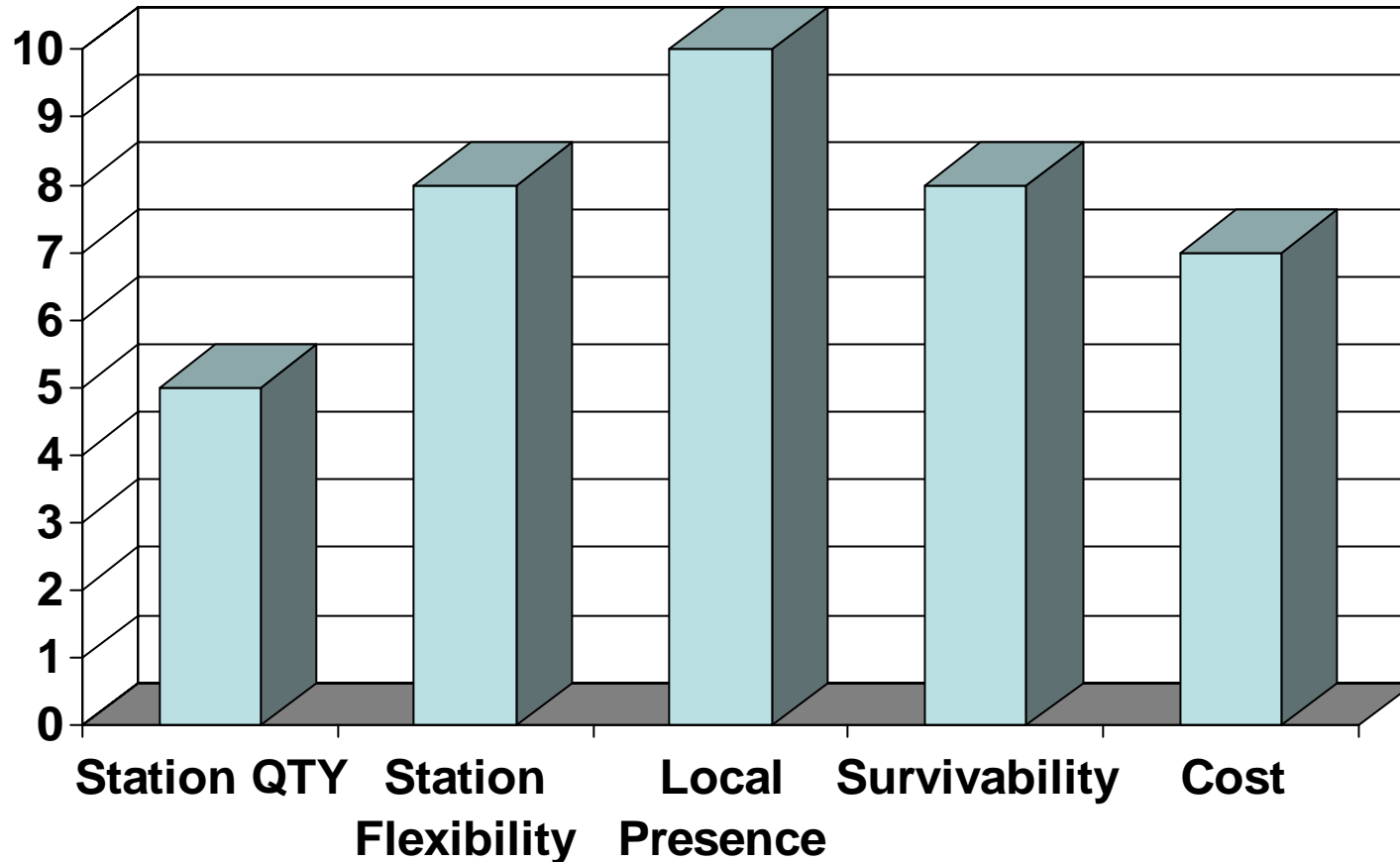
Station QTY — approx. 5
Station Flexibility — approx. 8
Local Presence — 10
Survivability — approx. 8
Cost — 7

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- ## Advantages
  - Shared adjunct access (i.e. Voicemail, Call Accounting, CMS, etc.)
  - One CM system to upgrade
  - VERY flexible trunking options
  - Very flexible station options (IP, Analog, Digital)
  - Local Survivable Processor is 100% Avaya Call Processing software in Survivable Mode

- ## Disadvantages
  - Very limited analog/digital station qty's. Max of 40 stations
  - There are a lot of "real life" issues to think about for survivability
  - Only supports up to 10 Call Center Agents (limited DSP's).
  - Not Stackable
  - LSP's can only be the brains for H.248 Gateways

- ## Requirements
  - S8300/S8500/S8700 CM2.0 or higher at main site (Enterprise Software recommended)
  - IP Enabled (MedPro's, C-LAN's, IP trunk and station RTU, etc.)
  - G350 at remote site with Media Modules to support desired endpoints
  - LAN/WAN that meets Connectivity, QOS and Bandwidth requirements
  - Desired endpoints
  - Multi Location Software or ARS Partitioning (limits qty)

Our Experience is your advantage

Let's Talk

Communication Manager
Remote Site Options – G700 with LSP

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Remote/Satellite Office

Main/Regional Office

Communication Manager Media Server/Gateway

LAN

Switched Ethernet & Routing

Corporate IP WAN

Messaging Server

LEC T1/CO/DID

Analog Stations
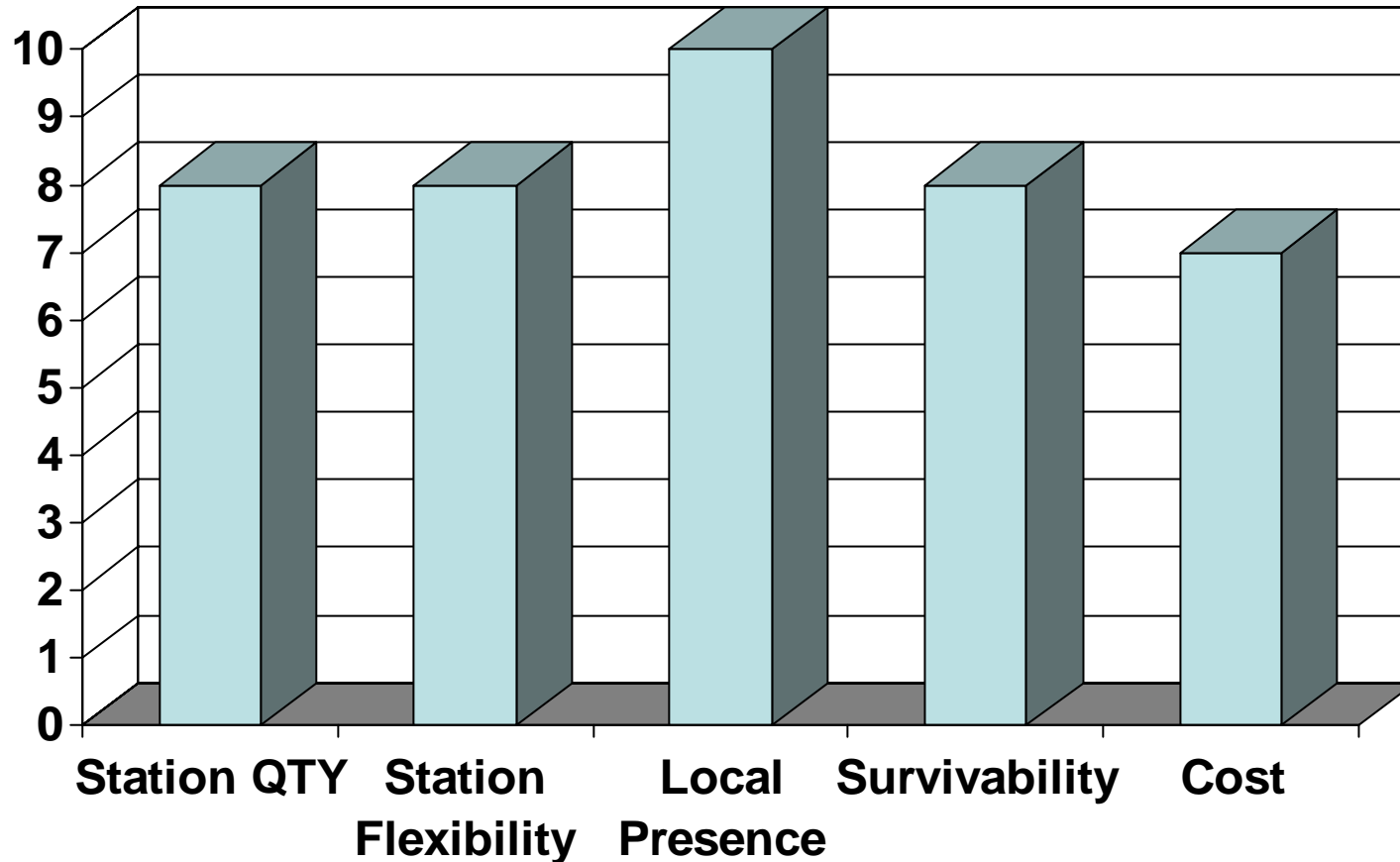
Digital Stations

LEC T1/CO/DID

Communication Manager
Remote Site Options – G700 with LSP

David Lover's Relative Score of Coolness

Our Experience is your advantage

Let's Talk

Where does it fit?
Remote Site Options – G700 with LSP

- Advantages
  - Shared adjunct access (i.e. Voicemail, Call Accounting, CMS, etc.)
  - One CM system to upgrade
  - VERY flexible trunking options
  - Very flexible station options (IP, Analog, Digital)
  - Local Survivable Processor is 100% Avaya Call Processing software in Survivable Mode.

- Disadvantages
  - Limited analog/digital station qty's.
  - There are a lot of "real life" issues to think about for survivability
  - LSP's can only be the brains for H.248 gateways

- Requirements
  - S8700 CM1.1 or higher at main site or S8300 CM1.3 or higher at main site
  - IP Enabled (MedPro's, C-LAN's, IP trunk and station RTU, etc.)
  - G700's at remote site with Media Modules to support desired endpoints
  - LAN/WAN that meets Connectivity, QOS and Bandwidth requirements
  - Desired endpoints
  - Multi Location Software or ARS Partitioning (limits qty)

Communication Manager
Enterprise Survivable Server

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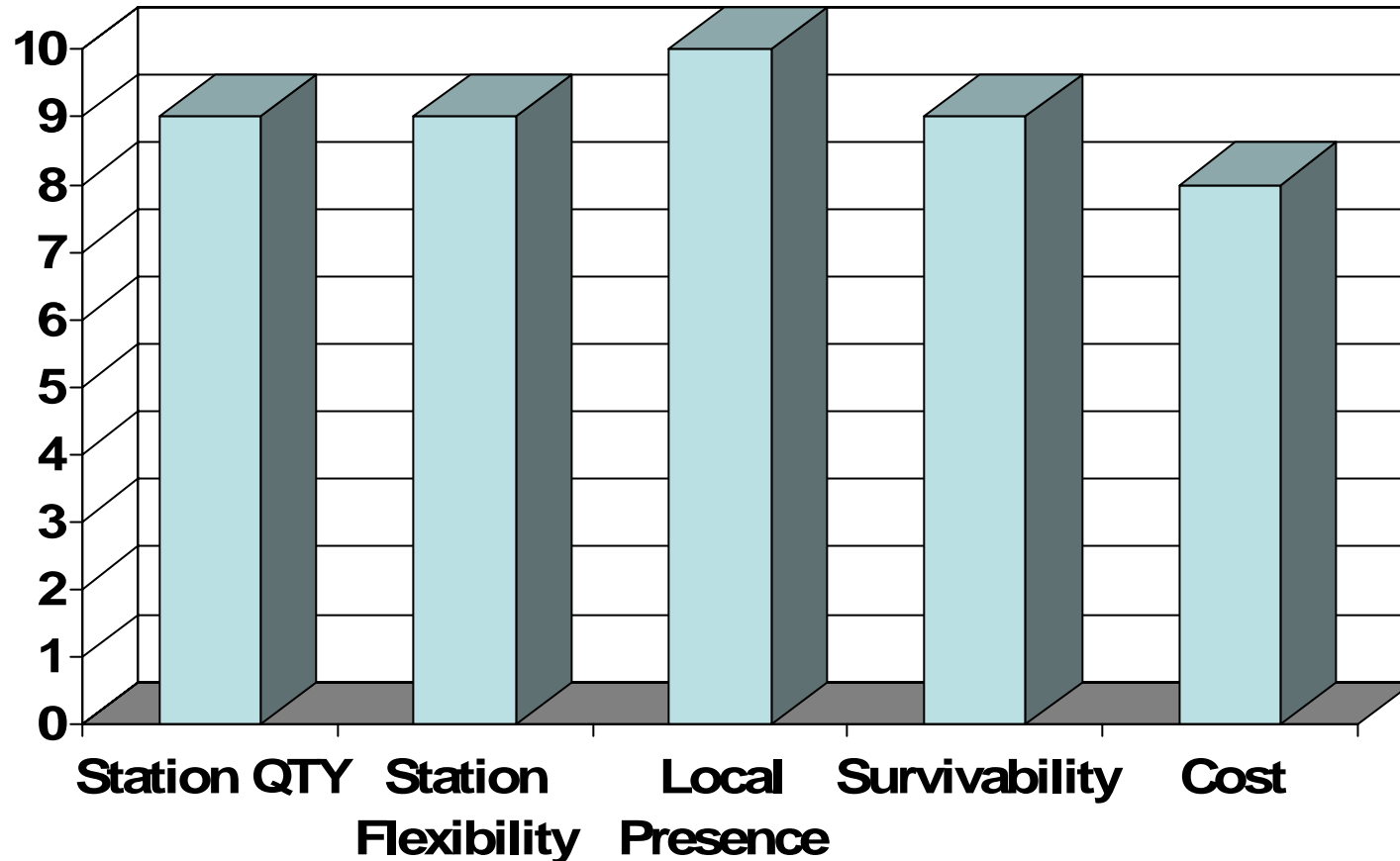
Remote/Satellite Office

Main/Regional Office

Communication Manager Media Server/Gateway

LAN

ESS

Switched Ethernet & Routing

Corporate IP WAN

LEC T1/CO/DID

Analog Stations

Digital Stations

Messaging Server

LEC T1/CO/DID

Communication Manager
Enterprise Survivable Server

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David Lover's Relative Score of Coolness

A bar chart titled "David Lover's Relative Score of Coolness" with a y-axis from 0 to 10. Categories: Station QTY (9), Station Flexibility (9), Local Presence (10), Survivability (9), Cost (8).

Where does it fit?
Remote Site Options – ESS

- **Advantages**
  - Shared adjunct access (i.e. Voicemail, Call Accounting, CMS, etc.)
  - One CM system to upgrade
  - VERY flexible trunking options
  - Very flexible station options (IP, Analog, Digital)
  - Local Survivable Processor is 100% Avaya Call Processing software in Survivable Mode.
  - ESS can be backup brain for ANY Avaya gateway

- **Disadvantages**
  - Limited analog/digital station qty's.
  - There are a lot of "real life" issues to think about for survivability

- **Requirements**
  - ACM CM3.0 with Enterprise Software
  - IP Enabled (MedPro's, C-LAN's, IP trunk and station RTU, etc.)
  - LAN/WAN that meets Connectivity, QOS and Bandwidth requirements
  - Desired endpoints

Our Experience is your advantage

Let's Talk

Communication Manager
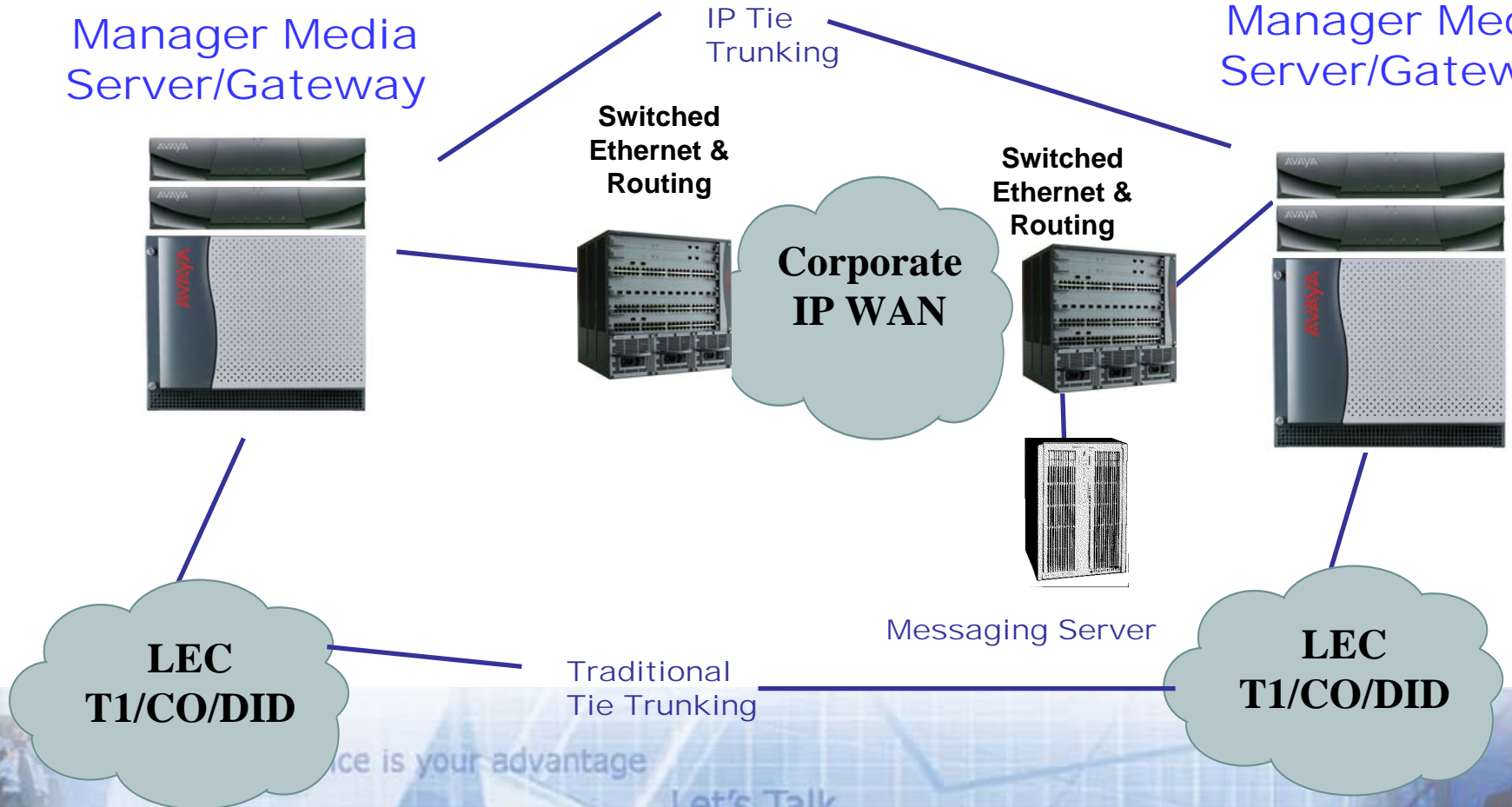## Remote Site Options – Separate Systems

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Remote/Satellite Office

Main/Regional Office

Communication Manager Media Server/Gateway
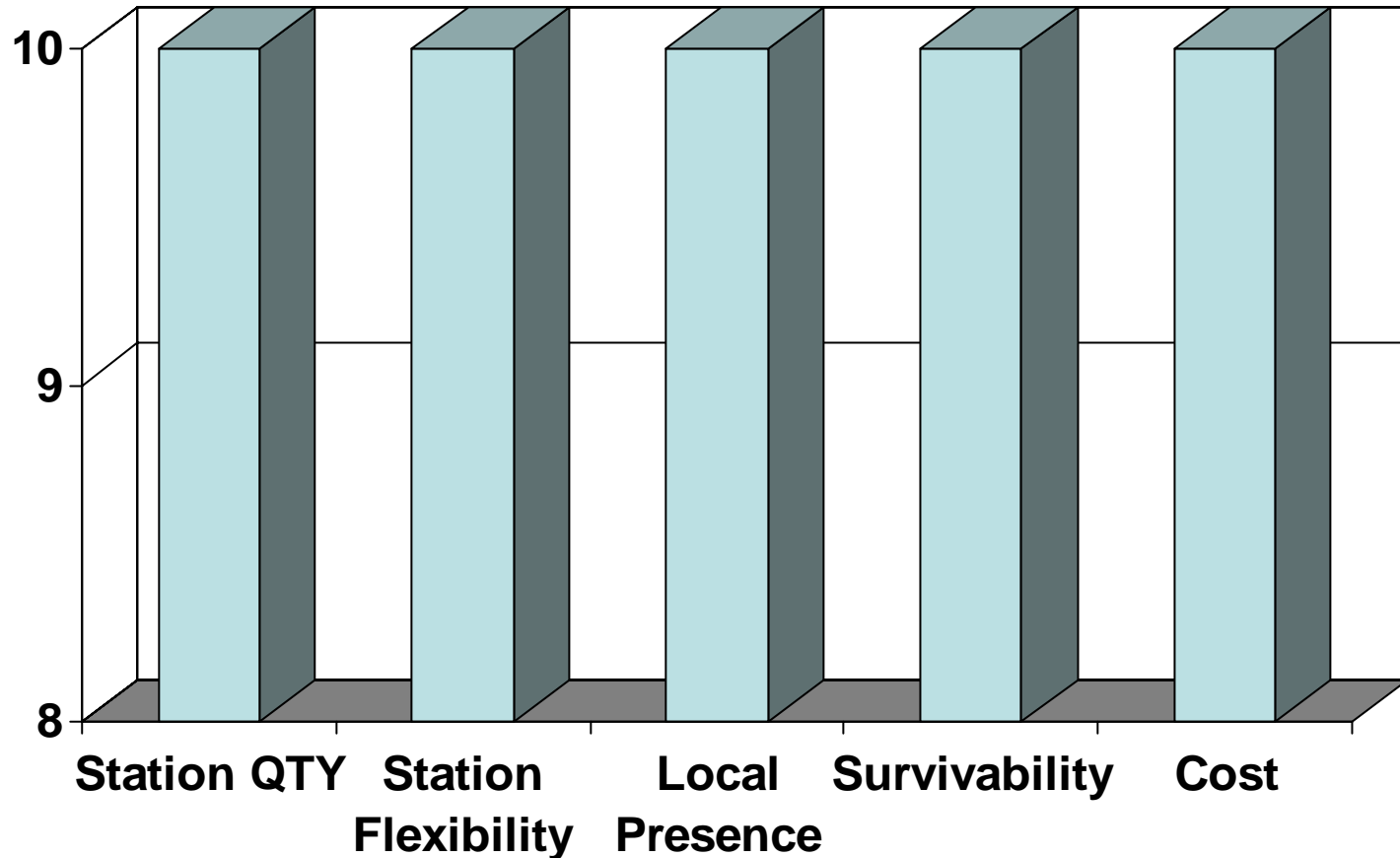
Communication Manager Media Server/Gateway

IP Tie Trunking

Switched Ethernet & Routing

Switched Ethernet & Routing

Corporate IP WAN

LEC T1/CO/DID

Messaging Server

Traditional Tie Trunking

LEC T1/CO/DID

Communication Manager

Remote Site Options - Separate Systems

David Lover's Relative Score of Coolness

Bar chart showing values of 10 for: Station QTY, Station Flexibility, Local Presence, Survivability, Cost (y-axis from 8 to 10)

Where does it fit?
Remote Site Options - Separate Systems

- Advantages
  - With DCS/QSIG Shared adjunct access (i.e. Voicemail, Call Accounting, CMS, etc.)
  - VERY flexible trunking options
  - Very flexible station options (IP, Analog, Digital)
  - Local Survivability not an issue since they are separate and independent
  - Been around for a long time

- Disadvantages
  - Costly
  - Multiple systems to upgrade
  - Multiple systems to administer

- Requirements
  - Definity/CM at both sites
  - Appropriate connectivity for system networking
  - Desired endpoints
  - DCS or QSIG

Our Experience is your advantage

Let's Talk

Communication Manager
Summary

Comparison Criteria

- Station Quantity
- Station Flexibility
- Local Presence
- Survivability

Remote Office Options

- Just IP Phones
- G150 H.323 Gatekeeper
- G250 (with optional LSP)
- G350 (with optional LSP)
- G700 (with optional LSP
- Enterprise Survivable Server
- Separate Systems Networked Together (DCS/QSIG)

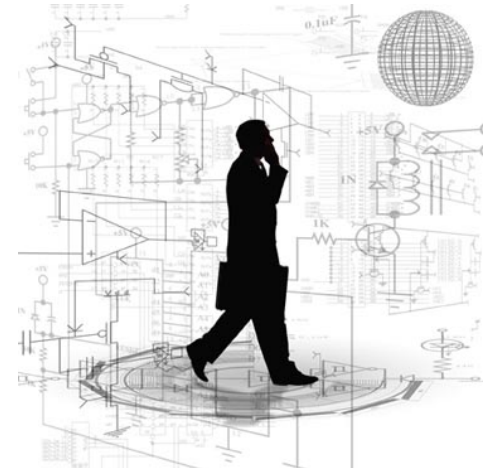# Cross Telecom

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